

## WHAT IS CLAIMED IS:

1. A communication device using infrared comprising:
  - (a) Integrated infrared chip (INChip);
  - (b) a driver ;and
  - (c) an infrared transceiver.
2. The communication device of claim 1, wherein said INChip supports infrared wireless networking.
3. The communication device of claim 1, wherein said device is for use on an aircraft.
4. The communication device of claim 1, wherein said infrared transceiver is an antenna, for readily negotiating between an end device connected to said infrared chip and a network section
5. The communication device of claim 1, wherein said device is selected from at least one of the group consisting of mobile phones, wireless telephone, mobile headsets, mobile two way headsets, dedicated Computer cards, a digital camera, PDA, laptops and a combination thereof.
6. The communication device of claim 1, wherein said INChip has

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infrared transmitting/receiving capabilities.

7. The communication device of claim 1, wherein said INChip transmits all the necessary information to the device it is attached to.

8. The communication device of claim 1, wherein said INChip is integrated inside said communication device.

9. The communication device of claim 1, wherein said INChip is located outside said communication device.

10. The communication device of claim 9, wherein said communication device is connected to an external device for infrared transceiving.

11. The communication device of claim 10, wherein said external device for infrared transceiving comprises an INChip and an infrared transceiver.

12. The communication device of claim 10, wherein said device is connected by a connection device to said external device for infrared transceiving.

13. The communication device of claim 1, wherein said INChip comprises modular based software.

14. The communication device of claim 13, wherein said software is configured to support a plurality of communication devices.

15. The communication device of claim 13, wherein said software is configured to have a plurality of variations for readily facilitating firmware changing.

16. The communication device of claim 1, wherein said INChip is configured to readily facilitate application with a variety of different devices, servers, applications and manufacturers.

17. The communication device of claim 1, wherein said device identifies voice and data infrared networking.

18. The communication device of claim 1, wherein said driver readily facilitates attaching said device to a wireless networking system (INetworking).

19. The communication device of claim 1, wherein one end of said driver connects to an end device and the other end of said driver connects to compatible protocol for INetworking.

20. The communication device of claim 1, wherein said device is configured to readily facilitate switching between RF to IR networking.

21. The communication device of claim 20, wherein said switching between RF and IR is done manually.

22. The communication device of claim 1, wherein said device can be integrated into any kind of existing infrared network system.

23. A wireless networking system (INetworking) comprising:

- (a) a computer based server component (INServer);
- (b) communication boxes (COMbox);
- (c) access points (AP);
- (d) at least one user device (UD); and
- (e) an Integrated infrared chip (INChip).

24. The wireless networking system of claim 23, wherein said system serves multi users simultaneously.

25. The wireless networking system of claim 23, wherein said system supports all data and information packages inside an airplane.

26. The wireless networking system of claim 23, wherein said system provides roaming, readily facilitating continuous connection when users go from one antenna coverage to another

27. The wireless networking system of claim 23, wherein said system is configured to readily facilitate sending and receiving information and data from and to a plurality of sources.

28. The wireless networking system of claim 27, wherein said sources are selected from the group consisting of cellular phone from microcell or a base station connection, voice over IP, voice by using internal intercom or telephonic systems.

29. The wireless networking system of claim 23, wherein said UD is a stand alone UD

30. The wireless networking system of claim 23, wherein said user device is any mobile or stationary communication device with incorporated INChip.

31. The wireless networking system of claim 23, wherein said UD comprises said INChip.

32. The wireless networking system of claim 23, wherein said user device is selected from one or a combination of UD phone, UD adaptor, UD card, UD terminal, UD headset, camera and UD card, laptop and UD card and PDA and UD card.

33. The wireless networking system of claim 23, wherein said UD is connected to said AP using diffused infrared technology.

34. The wireless networking system of claim 23, wherein said AP is wired between said UD and said INServer.

35. The wireless networking system of claim 23, wherein said system is for use on an airplane.

36. The wireless networking system of claim 23, wherein said INServer controls voice calls, data and video services in said airplane.

37. The wireless networking system of claim 23, wherein said INServer receives information from different sources in said airplane and from sources of other providers.

38. The wireless networking system of claim 37, wherein said providers are selected from one or a combination from the group of ground telephony services via satellite connection, internet and email services.

39. The wireless networking system of claim 35, wherein said user device is a UD phone configured to readily facilitate making outgoing call, receiving calls, sending and receiving SMS messages, using WAP services and internet and intranet connection.

40. The wireless networking system of claim 35, wherein said UD phone comprises an SIM card reader to read SIM card identity.

41. The wireless networking system of claim 35, wherein said user device is a UD terminal configured to readily facilitate the airplane crew in the cockpit to be in constant communication with the airplane staff.

42. The wireless networking system of claim 35, wherein said user device is a headset configured to readily facilitate providing a means for

passenger's entertainment, service and crew communication.

43. The wireless networking system of claim 42, wherein said headset comprise a coder/encoder facilitating voice transmitting security.

44. The wireless networking system of claim 42, wherein said system is configured to deliver video images from a camera in said airplane.

45. The wireless networking system of claim 42, wherein said system is configured to deliver data from sensors and gauges in said airplane to the cockpit.

46. The wireless networking system of claim 23, wherein said system is for use in any form of transportation where mobility is needed.

47. The wireless networking system of claim 46, wherein said transportation is selected from the group consisting of aircraft, submarines, trains and ships.



48. The wireless networking system of claim 35, wherein said access point is a fixed transceiver unit, configured to readily facilitate connection between UD via infrared beams and Communication boxes.

49. The wireless networking system of claim 35, wherein said communication boxes comprise HUB, switch and router by fixed lines or cables.

50. The wireless networking system of claim 35, wherein one side of said communication box is connected to said AP and a second side of said communication boxes is connected to said INServer.

51. The wireless networking system of claim 35, wherein said access points provide two-way communication of video, voice and data to and from said user devices.

52. The wireless networking system of claim 35, wherein there are a

plurality of communication boxes, wherein each communication box has a different function.

53. The wireless networking system of claim 35, wherein there is one communication box configured to readily facilitate all applications.

54. The wireless networking system of claim 35, wherein said INServer is a computer with processing and storage facilities.

55. The wireless networking system of claim 35, wherein said INServer comprises a package of hardware and software together.

56. The wireless networking system of claim 35, wherein said INServer comprises a modular software based application for readily installing in a computer.

57. The wireless networking system of claim 56, wherein said computer software controls said wireless communication system.

58. The wireless networking system of claim 35, wherein said INServer comprises a flight information back up system, cabin door control and black box reader.

59. The wireless networking system of claim 35, wherein said INServer comprises a built in cellular engine/modem connected by a cellular network to the user, when the airplane is on the ground.

60. The wireless networking system of claim 35, wherein during flight said INServer is connected to third party providers of ground connection, which use satellite to deliver information.

61. A wireless networking system (INetworking) for use in an aircraft comprising:

- (a) a computer based software server component (INServer);
- (b) communication boxes (COMbox);
- (c) access points (AP);
- (d) at least one user device (UD); and
- (e) an Integrated infrared chip (INChip).

62. A method of using a communication device comprising the following steps:

- (a) providing a communication device comprising;
  - (i) Integrated infrared chip (INChip);
  - (ii) a driver ;and
  - (iii) an infrared transceiver; and
- (b) receiving and transmitting messages with said communication

device.

63. ~~A method of using a wireless networking system in an aircraft~~ ---  
comprising the steps of:

- (a) providing a wireless networking system comprising:
  - (i) a computer based server (INServer);
  - (ii) communication boxes (COMbox);
  - (iii) access points (AP);
  - (iv) at least one user device (UD); and
  - (v) an Integrated infrared chip (INChip);
- (b) connecting said UD to said AP, wherein said AP is configured to readily facilitate connection between said UD and said Communication boxes;
- (c) connecting said AP to said communication boxes;
- (d) connecting a second side of said communication boxes to said INServer
- (e) connecting said INServer to a ground telephony server; and
- (f) connecting said ground telephony server to ground services; and
- (g) receiving and transmitting messages with said UD.

64. The communication device according to any one of claim 1-23,  
substantially as herein described and according to the figures.

65. The wireless networking system according to any one of claims 24-60, substantially as herein described and according to the figures.

66. The wireless networking system (INetworking) for use in an aircraft according to claim 61, substantially as herein described and with reference to the figures.

67. A method of using a communication device according to claim 62, substantially as herein described and with reference to the figures.

68. A method of using a wireless networking system according to claim 63, substantially as herein described and with reference to the figures.

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